

Docket No. BPHOTO.012

**ABSTRACT OF THE DISCLOSURE**

**MULTI-WAVELENGTH GRATING-OUTCOUPLED SURFACE EMITTING LASER  
SYSTEM**

5 A surface emitting semiconductor laser system having four cavities that couple light from  
a single aperture. Each of the four cavities overlaps at the outcoupling aperture. Each cavity is  
fabricated to resonate at a different central wavelength, outputting a different frequency of light,  
10 each of which can be independently modulated.